

Remarks

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and following remarks. Claims 1-25 remain pending in the current application. Claims 1 and 20-23 have been amended to clarify the meaning of claim terms used therein. Because the claim amendments merely clarify terms used therein, the scope of the original claims remains unchanged. Claims 24 and 25 have been added.

I. Claim Rejections under 35 U.S.C. § 102

The Office Action alleges that claims 1-8 and 10-23 are anticipated under 35 U.S.C. § 102(e) by U.S. Patent No. 6,134,516 (“Wang”). These rejections are respectfully traversed.

a. Claims 1-8, 10-19, and 21

Independent claim 1 is directed to a method comprising, in relevant part: “retrieving state configuration information from a state server of a hardware/software co-simulation, wherein the hardware/software co-simulation simulates a software component of a system being executed and interacting with a hardware component of the system; and providing a client of the hardware/software co-simulation access to a server state of the state server based on the state configuration information.” Independent claim 21 is also directed to a method, which comprises in relevant part: “retrieving state configuration information from a state server of a hardware/software co-simulator, wherein the hardware/software co-simulator simulates a software component of a system being executed and interacting with a hardware component of the system; and providing a client of the hardware/software co-simulator access to a server state of the state server based on the state configuration information.”

Wang does not teach or suggest a hardware/software co-simulation or co-simulator wherein the hardware/software co-simulation or co-simulator “simulates a software component of a system being executed and interacting with a hardware component of the system” as recited in independent claims 1 and 21. Wang is understood to disclose a system for simulating electronic designs by providing users of the system the ability to turn their designs into software and hardware representations for simulation. (Wang, col. 3, lines 55-58). Thus, as used in Wang, the term “co-simulation” refers to using a combination of a hardware emulator/accelerator and a software simulator to simulate and debug a particular circuit design. (Wang, col. 3, lines 38-43). Further, as defined in Wang, the “circuit design” or “electronic design” that is simulated by the disclosed system is a “custom designed system or component, whether software or hardware, which can be modeled by the SEmulation system for test/debug purposes.” (Wang, col. 11, lines 1-5) (emphasis added). Thus, Wang is understood to be limited to simulating hardware or software, but not software being executed in a system and interacting with hardware of the system.

By contrast, the present application is concerned with a different type of “co-simulation” known in the field of electronic design automation. Specifically, the claims of the present application are directed to hardware/software co-simulation wherein the hardware/software co-simulation simulates “a software component of a system being executed and interacting with a hardware component of the system.” For example, as described in the Specification, embodiments of the disclosed hardware/software co-simulator can be used to simulate “a microprocessor, some memory devices, and special-purpose hardware 117[, wherein the] simulated microprocessor executes software 161 stored in the simulated memory devices.” (Specification, pg. 9, lines 1-7).

Accordingly, because Wang is directed to a fundamentally different type of co-simulation and because the claims of the present application have been amended to clarify this distinction, Applicant respectfully requests that the 35 U.S.C. § 102(e) rejection be withdrawn from independent claims 1 and 21.

Dependent claims 2-8 and 10-19 depend from independent claim 1 and are allowable for at least the reasons recited above with respect to independent claim 1. Moreover, claims 2-8 and 10-19 recite combinations of features that are independently patentable over the cited reference. Accordingly, the 35 U.S.C. § 102(e) rejection of claims 2-8 and 10-19 should also be withdrawn.

b. Claims 20 and 22

Independent claim 20 recites a method comprising “accessing a software state from a hardware simulation process in a hardware/software co-simulation, wherein the hardware/software co-simulation simulates a software component of a system being executed and interacting with a hardware component of the system.” Independent claim 22 recites a machine readable storage medium having stored thereon machine executable instructions for implementing a method comprising “accessing a software state from a hardware simulation process in a hardware/software co-simulation, wherein the hardware/software co-simulation simulates a software component of a system being executed and interacting with a hardware component of the system.”

As discussed above with respect to independent claims 1 and 21, Wang is understood not to disclose anything related to hardware/software co-simulation wherein the hardware/software co-simulation “simulates a software component of a system being executed and interacting with a hardware component of the system,” as recited in independent claims 20 and 22. Accordingly,

for at least these reasons, Applicant respectfully requests that the 35 U.S.C. § 102(e) rejection be withdrawn from independent claims 20 and 22.

c. Claim 23

Independent claim 23 recites “a hardware/software co-simulator to retrieve state configuration information from a state server, wherein the hardware/software co-simulator is configured to simulate a software component of a system being executed and interacting with a hardware component of the system.”

As discussed above with respect to independent claims 1 and 21, Wang is understood not to disclose anything related to a hardware/software co-simulator wherein the hardware/software co-simulator “simulates a software component of a system being executed and interacting with a hardware component of the system,” as recited in independent claim 23. Accordingly, for at least these reasons, Applicant respectfully requests that the 35 U.S.C. § 102(e) rejection be withdrawn from independent claim 23.

II. Claim Rejection under 35 U.S.C. § 103

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,134,516 (“Wang”) in view of U.S. Patent No. 5,768,567 (“Klein”). This rejection is respectfully traversed. Claim 9 sets forth an independently patentable combination of method acts.

a. Claim 9

As discussed above with respect to claim 1 (the parent claim to claim 9), Wang fails to teach or suggest hardware/software co-simulation wherein the hardware/software co-simulation “simulates a software component of a system being executed and interacting with a hardware component of the system,” as recited in claim 1. Moreover, because Wang does not concern hardware/software co-simulation as disclosed in the present application, it would not be combined with Klein. Therefore, for at least these reasons, claim 9 is allowable over Wang in view of Klein and the 35 U.S.C. § 103(a) rejection of claim 9 should be removed.

III. Request for Examiner Interview

The Examiner is formally requested to contact the undersigned attorney to arrange for an Examiner Interview. This request is being submitted under MPEP § 713.01, which indicates that an interview may be arranged in advance by a written request.

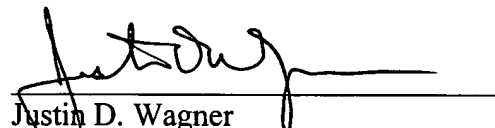
IV. Conclusion

The present application is now in condition for allowance and such action is respectfully requested. If any further issues remain, the Examiner is invited to contact the undersigned attorney.

Respectfully submitted,

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